

Table 2. Surfion PFAS Concentrations and Composition Profiles ^{a,b,c}

Product	Dates		Sample No.	Units	Chemical Name									Σ PFAS ^d
	Purchased	Used by Solvay			PFHpA	PFOA	PFOS	PFNA	PFDA	PFUnDA	PFDoDA	PFTTrDA	PFTeDA	
Powdered Surfion	1991	1990*–1996	Sample ID-100	mg/L	0.0472 J, B	0.248 B	NA	45.3	0.294	11.4	0.0741	3.69	0.0450 J	61.1
			Sample ID-101	mg/L	0.0221 J, B	0.149 B	NA	9.22	0.0366 J	1.55	0.00928 J	0.632	0.00667 J	11.6
Water Based Surfion	1998 or 1999	1996–2010	Sample ID-102	mg/L	0.0559 B	0.177 B	NA	13.8	0.0592	1.96	0.00900 J	0.583	0.00505 U	16.6
			Sample ID-103	mg/L	0.0331 J, B	0.125 B	NA	9.59	0.0353 J	1.45	0.00719 J	0.427	0.00490 U	11.7
Mass Composition Profile for PFAS (100% linear isomer; 0% branched isomer)														
Sample			Sample No.	Units	PFHpA	PFOA	PFOS	PFNA	PFDA	PFUnDA	PFDoDA	PFTTrDA	PFTeDA	Σ PFAS ^d
Powdered Surfion	1991	1990*–1996	Sample ID-100	%	0.1%	0.4%	NA	74.1%	0.5%	18.7%	0.1%	6.0%	0.1%	100%
			Sample ID-101	%	0.2%	1.3%	NA	79.3%	0.3%	13.3%	0.1%	5.4%	0.1%	100%
Water Based Surfion	1998 or 1999	1996–2010	Sample ID-102	%	0.3%	1.1%	NA	82.9%	0.4%	11.8%	0.1%	3.5%	0.03%	100%
			Sample ID-103	%	0.3%	1.1%	NA	82.2%	0.3%	12.4%	0.1%	3.7%	0.04%	100%
Composition Profile for PFAS														
Sample					<C8			C9		C11		≥C12		Σ PFAS ^d
Surfion Test Material (Toxicity Studies) ^e	2003, 2005		Average for 6 Lots	%		1.2%		79.0%		14.8%		5.2%		100%

Notes:

NA = not applicable (not measured)

PFAS = perfluoroalkyl substance

PFDA = perfluorodecanoic acid (C10)

PFDoDA = perfluorododecanoic acid (C12)

PFHpA = perfluoroheptanoic acid (C7)

PFNA = perfluorononanoic acid (C9)

PFOA = perfluorooctanoic acid (C8)

PFOS = perfluorooctanesulfonic acid (C8)

PFTeDA = perfluorotetradecanoic acid (C14)

PFTTrDA = perfluorotridecanoic acid (C13)

PFUnDA = perfluoroundecanoic acid (C11)

B = compound was detected in the laboratory blank

J = result was detected at or greater than the method detection limit and less than method reporting limit

U = result was not detected at the method detection limit; the value shown is the method detection limit

^a Results reported by Vista Analytical Laboratory.^b Calibration standards were analyzed to identify both branched and linear isomers; however, no branched isomers were present in the samples at detectable levels. The reported concentrations are based entirely on the linear isomers.^c Samples were provided to laboratory in an aqueous solution. Because sample preparations were different the absolute concentrations vary; however, the percent compositions are similar.^d Sum of PFAS concentrations, including non-detects at method detection limits.^e Based on Certificate of Analysis for test material used in two rodent toxicity studies with Surfion: 1) Mertens, J. 2006. A 90-day repeated dose oral (gavage) toxicity study of S-111-S-WB with a 60-day recovery period in rats. WIL Research Laboratories, LLC, Sponsored by Society of Plastics Industry, Inc.; 2) Stump, D. 2005. An oral (gavage) two-generation reproductive toxicity study of S-111-S-WB in rats. WIL Research Laboratories, LLC, Sponsored by Society of Plastics Industry, Inc.^f Used by Penwalt/AtoChem from 1985 to 1990.